

Figure S1. Major cities in South Korea. Bold words and boundaries indicate eight provinces (Korean names: -do) and one island in South Korea. The population as of 2021. The background map is Figure 6a.

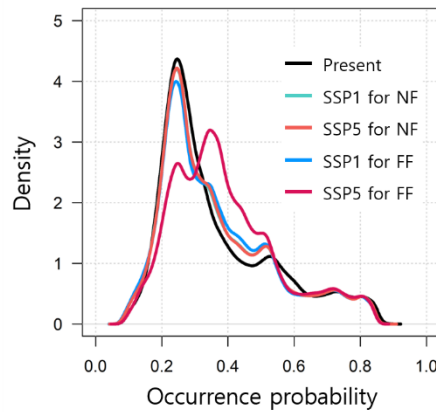


Figure S2. Change of occurrence probability density of WCSBs in South Korea due to climate change. Present means present climate conditions as an average of historical periods (1970–2000). Also, NF and FF mean the near future (2021–2040) and the far future (2061–2080). SSP is shared socioeconomic pathways data for future climate; SSP1 and SSP5 are the abbreviations for SSP1-2.6 and SSP5-8.5, respectively.

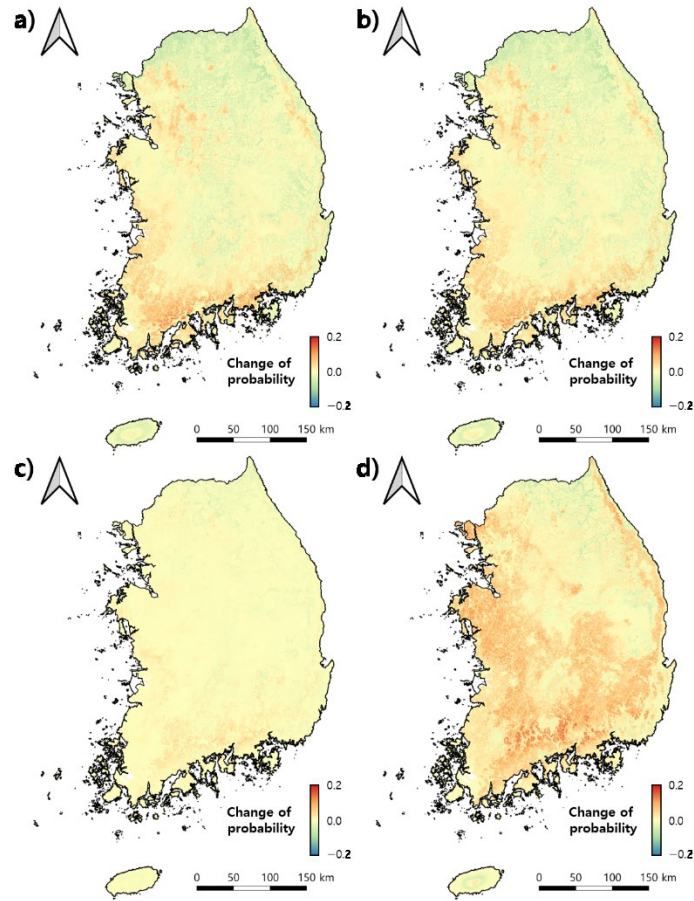


Figure S3. Change of occurrence risk of WCSBs between present and future. The degree of change was obtained by subtracting the map (a-b) in present from the map in the near future (2021-2040), and (c-d) the near future from the far future (2061-2080). SSP1-2.6 and SSP5-8.5 scenario data were used: a) change in near future with SSP1-2.6 conditions, b) change in near future with SSP5-8.5 conditions, c) change in far future with SSP1-2.6 conditions, d) change in far future with SSP5-8.5 conditions.

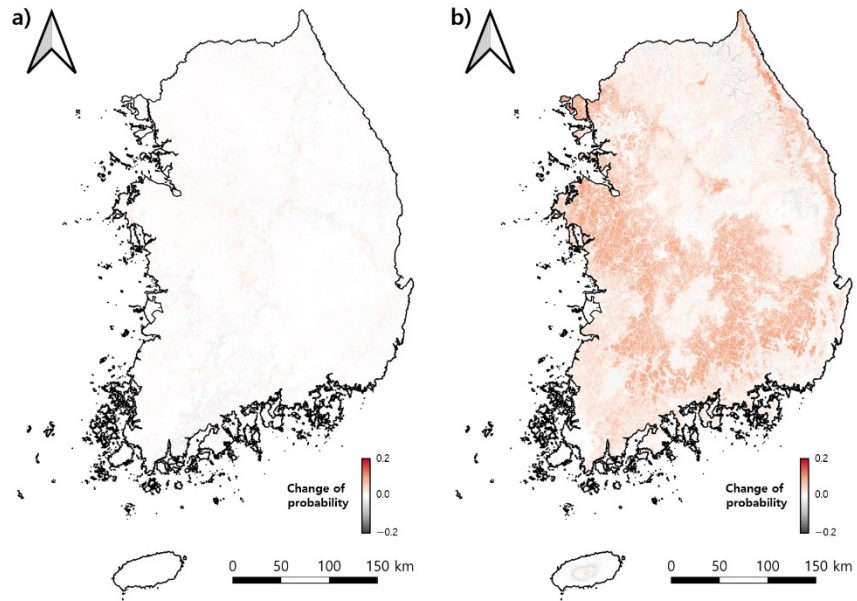


Figure S4. Vulnerable areas to climate change in WCSB occurrence. The vulnerability maps display the difference between climate change scenarios (SSP5-8.5 and SSP1-2.6). a) Vulnerable areas in the near future (2021-2040), b) Vulnerable areas in the far future (2061-2080).